QC ABSTRACT

NAME OF WORK: Improvements to Main roads, Cross roads and drains in ward no.10 Doddabommasandra

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
		Materials				
1	WMM	Sieve Analysis	One Test		1	1
		Impact Value	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
2	DBM	SIEVE ANALYSIS	One Test		1	1
		STRIPPING VALUE	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		IMPACT VALUE	One Test		1	1
		Specific gravity	One Test		1	1
		Water Absorption	One Test		1	1
		Marshal Stability	One Test		1	1
		Marshal flow	One Test		1	1
		Percent air Voids	One Test		1	1
		Percent Voids in mineral Aggregate	One Test		1	1
		Percent Voids filled with Bitumen	One Test		1	1
		Density	One Test		1	1
		Gradation	One Test		1	1
3	BC	SIEVE ANALYSIS	One Test		1	1
		STRIPPING VALUE	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		IMPACT VALUE	One Test		1	1
		Specific gravity	One Test		1	1
		Water Absorption	One Test		1	1
		Marshal Stability	One Test		1	1
		Marshal flow	One Test		1	1
		Percent air Voids	One Test		1	1
		Percent Voids in mineral	One Test		1	1
		Percent Voids filled with Bitumen	One Test		1	1
		Density	One Test		1	1
		Gradation	One Test		1	1
4	BITUMEN	Ductility	One Test		1	1
		Softening Point	One Test		1	1
		Penetration	One Test		1	1
		Flash Point	One Test		1	1
		Fire Point	One Test		1	1
5	TACK COAT	Rate of Spread	One Test		1	1

AE-13

AEE (VRP) SD

Format No: CP/TF/01

TEST REPORT ON BITUMEN

Lab ID	:	**CP-RW-2023-06-19-18** **Date: 24-03-23**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Main roads, Cross roads and drains in ward no.10 Doddabommasandra
Agency	:	Sri. CHANNAKESHAWA ENTERPRISES, Prop. Kiran Gowda D. No:882, 2nd Floor, Monika Nilaya, 13th Cross, Havanoor, Extn, Nagasandra Post, Bangalore-560073
Customer's Reference	:	BBMP/EE/BTP/WO/28/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	21-03-23
Sample Type	:	Bitumen
Reference to BIS codes	:	IS: 1201-2021, IS: 1202-1220(1978) (Reaffirmed-2019)
Date of Test	:	21-03-23

Test Results

Sl.no	Name of Test	Result	Requirements as per IS:73-2013
1	Penetration at 25°C , in 1/10th mm	**56**	Min 45mm
2	Softening Point, °C	**51.6**	Min. 47°C
3	Ductility, cm	**97**	Min. 40cm
4	Flash point, °C	**290**	Min. 220°C
	Fire point, °C	**302**	

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested.
All information Furnished by Agency/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

AE-13

AEE (WRP) SD

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

TEST RESULTS OF GRADATION FOR WMM

Lab ID	:	**CP-RW-2023-06-19-18** **Date: 16-03-23**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Main roads, Cross roads and drains in ward no.10 Doddabommasandra
Agency	:	Sri. CHANNAKESHAWA ENTERPRISES, Prop. Kiran Gowda D, No:882, 2nd Floor, Monika Nilaya, 13th Cross, Havanoor, Extn, Nagasandra Post, Bangalore-560073
Customer Reference	:	BBMP/EE/BTP/WO/28/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	14-03-23
Type of Mix	:	WMM (Wet Mix Macadam)
Date of Test	:	14-03-23
Oven Dry Weight	:	11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	313	313	2.8	97.2	95-100
22.4	2262	2575	23.4	76.6	60-80
11.2	2175	4750	43.2	56.8	40-60
4.75	2255	7005	63.7	36.3	25-40
2.36	1624	8629	78.4	21.6	15-30
0.6	625	9254	84.1	15.9	8-22
0.075	1338	10592	96.3	3.7	0-5

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested.
All information Furnished by Agency/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

AE-13

AEE (VRP) SD

Page 1/1
End of Report

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

TEST REPORT OF AGGEGRATE IMPACT VALUE
IS: 2386 Part IV

Lab ID	:	**CP-RW-2023-06-19-18**	**Date: 16-03-23**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.	
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.	
Project Name	:	Improvements to Main roads, Cross roads and drains in ward no.10 Doddabommasandra	
Agency	:	Sri. CHANNAKESHAWA ENTERPRISES, Prop. Kiran Gowda D. No:882, 2nd Floor, Monika Nilaya, 13th Cross, Havanoor, Extn, Nagasandra Post, Bangalore-560073	
Customer Reference	:	BBMP/EE/BTP/WO/28/2022-23	
Source of Sample	:	Sample supplied by Agency	
Sample Condition	:	Satisfactory	
Date of Receipt	:	14-03-23	
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)	
Date of Test	:	14-03-23	

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	300.2	300.2
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	73.9	74.0
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	225.9	225.8
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.4	0.4
5	Aggregate impact value	(B/A)*100	24.6	24.7
6	Aggregate impact value (Mean of two tests)	Pecentage	24.6	

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested.
All information Furnished by Agency/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

AE-B

AEE (VRP) SB

CIVIL Pro Sig Date BANGALORE

FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

Page 1/1
End of Report

DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2023-06-19-18** **Date: 16-03-23**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Main roads, Cross roads and drains in ward no.10 Doddabommasandra
Agency	:	Sri. CHANNAKESHAWA ENTERPRISES, Prop. Kiran Gowda D, No:882, 2nd Floor, Monika Nilaya, 13th Cross, Havanoor, Extn, Nagasandra Post, Bangalore-560073
Customer Reference	:	BBMP/EE/BTP/WO/28/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	14-03-23
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of Test	:	14-03-23

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	12.6%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	12.9%	
Combined Flakiness and Elongation Index for WMM	25.5%	

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested.
All information Furnished by Agency/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

AE-13

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

AEE (VRP) SD

End of Report

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

TEST RESULTS OF GRADATION FOR DBM
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID	:	**CP-RW-2023-06-19-18** **Date: 30-03-23**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Main roads, Cross roads and drains in ward no.10 Doddabommasandra
Agency	:	Sri. CHANNAKESHAWA ENTERPRISES, Prop. Kiran Gowda D, No:882, 2nd Floor, Monika Nilaya, 13th Cross, Havanoor, Extn, Nagasandra Post, Bangalore-560073
Customer Reference	:	BBMP/EE/BTP/WO/28/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	28-03-23
Type of Mix	:	DBM-Plant (Dense Bituminous Macadam)
Date of Test	:	28-03-23
Weight of Sample	:	5000 Grams

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-10 (grading -2)
37.5	0	0	0	100	100
26.5	255	255	5.10	94.90	90-100
19	357	612	12.24	87.76	71-95
13.2	444	1056	21.12	78.88	56-80
4.75	1759	2815	56.30	43.70	38-54
2.36	397	3212	64.24	35.76	28-42
0.3	1347	4559	91.18	8.82	7-21
0.075	241	4800	96.00	4.00	2-8
PAN	200	5000	0.00	0	0

* The results obtained are satisfactory as per standard requirements.

Note:-
The results pertain to the samples received and tested.
All information Furnished by Agency/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

AE-13

AEE (VRP) SD

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | ENVIRONMENTAL
WATER TESTING | GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES

PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR DENSE BITUMINOUS MACADAM

Lab ID	:	**CP-RW-2023-06-19-18** **Date: 31-03-23**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Main roads, Cross roads and drains in ward no.10 Doddabommasandra
Agency	:	Sri. CHANNAKESHAWA ENTERPRISES, Prop. Kiran Gowda D, No:882, 2nd Floor, Monika Nilaya, 13th Cross, Havanoor, Extn, Nagasandra Post, Bangalore-560073
Customer Reference	:	BBMP/EE/BTP/WO/28/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	28-03-23
Type of Mix	:	DBM (Dense Bituminous Macadam)
Date of Test	:	28-03-23

Table 500-6 : Physical Requirements fo Coarse Aggregate for Dense Bituminous Macadam

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	12.0	Combined Flakiness & Elongation Index for DBM is Maximum 35%	IS:2386 Part I
	Elongation Index	13.0		
Strength	Aggregate Impact Value	21.0	Maximum 30%	IS:2386 Part IV
Specific gravity	Specific gravity	2.58	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.38	Maximum 2%	IS:2386 Part III

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested.
All information Furnished by Agency/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

AE-13

AEE (VRP) SD

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quallity Manager

TESTS RESULTS ON STABILITY OF MIX

Lab ID	:	**CP-RW-2023-06-19-18** **Date: 31-03-23**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Main roads, Cross roads and drains in ward no.10 Doddabommasandra
Agency	:	Sri. CHANNAKESHAWA ENTERPRISES, Prop. Kiran Gowda D, No:882, 2nd Floor, Monika Nilaya, 13th Cross, Havanoor, Extn, Nagasandra Post, Bangalore-560073
Customer Reference	:	BBMP/EE/BTP/WO/28/2022-23
Source of Sample	:	Hot Mix Plant, Bangalore
Sample Condition	:	Satisfactory
Date of Receipt	:	28-03-23
Type of Mix	:	DBM (Dense Bituminous Mecadam)
Date of Test	:	28-03-23

The results of the tests conducted on the Dense Bituminous Macadam mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.29	11.82	9KN(Min)
2	Marshal flow at 60°C, mm	3.54	3.87	2-4
3	Percent air Voids	4.56	4.17	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.54	14.76	13-15
5	Percent Voids filled with Bitumen(VFB %)	68.98	70.28	65-75
6	Density, g/cc	2.42	2.40	–

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested.
All information Furnished by Agency/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

AEE (VRP) SD

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.
KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Lab ID	:	**CP-RW-2023-06-19-18** **Date: 31-03-23**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Main roads, Cross roads and drains in ward no.10 Doddabommasandra
Agency	:	Sri. CHANNAKESHAWA ENTERPRISES, Prop. Kiran Gowda D, No:882, 2nd Floor, Monika Nilaya, 13th Cross, Havanoor, Extn,
Customer Reference	:	BBMP/EE/BTP/WO/28/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	28-03-23
Type of Mix	:	DBM(Dense Bitumnous Macadam)
Date of Test	:	28-03-23

Type of Binder	:	60/70
% of Binder Used	:	4.5%
Weight of Aggregate	:	200.0 gm
Weight of Binder	:	9.0 gm
Temperature of water bath	:	40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.0	2.0	98.2	Minimum Retained Coating 95%
2	98.5	1.5		
3	98.0	2.0		

* The results obtained are satisfactory as per standard requirements.

Note:-
The results pertain to the samples received and tested.
All information Furnished by Agency/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

AE13

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro

KARTHIK RECHAN
Authorized Signatory
Quality Manager

AEE (VRP) SD

****End of Report****

TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR DBM
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID	:	**CP-RW-2023-06-19-18**	**Date: 12-04-23**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.	
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.	
Project Name	:	Improvements to Main roads, Cross roads and drains in ward no.10 Doddabommasandra	
Agency	:	Sri. CHANNAKESHAWA ENTERPRISES, Prop. Kiran Gowda D, No:882, 2nd Floor, Monika Nilaya, 13th Cross, Havanoor, Extn, Nagasandra Post, Bangalore-560073	
Customer Reference	:	BBMP/EE/BTP/WO/28/2022-23	
Source of Sample	:	Sample supplied by Agency	
Date of Receipt	:	11-04-23	
Type of Mix	:	DBM (Dense Bituminous Macadam)	
Date of Test	:	11-04-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	479.5	479
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1}$ X 100	4.5	4.60
7	Average percentage	%	4.55	

AE-13

AEE (VRP) SD

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

Lab ID : **CP-RW-2023-06-19-18** **Date: 12-04-23**

AFTER EXTRACTION(Trail-1)

Weight of Sample(gm) : 479.5

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH specification Table 500-10(grading -2)
37.5	0	0	0.0	100.0	100
26.5	0	0	0.0	100.0	90-100
19	51	51	10.6	89.4	71-95
13.2	45	96	20.0	80.0	56-80
4.75	188	284	59.2	40.8	38-54
2.36	55	339	70.7	29.3	28-42
0.3	50	389	81.1	18.9	7-21
0.075	64	453	94.5	5.5	2-8

AFTER EXTRACTION(Trail-2)

Weight of Sample(gm) : 479

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH specification Table 500-10(grading -2)
37.5	0	0	0.0	100.0	100
26.5	0	0	0.0	100.0	90-100
19	45	45	9.4	90.6	71-95
13.2	110	155	32.4	67.6	56-80
4.75	133	288	60.1	39.9	38-54
2.36	50	338	70.6	29.4	28-42
0.3	100	438	91.4	8.6	7-21
0.075	10	448	93.5	6.5	2-8

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested.
All information Furnished by Agency/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

AE-13

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

AEE (VRDLSD

TEST RESULTS OF GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2007)

Lab ID : **CP-RW-2023-06-19-18** **Date: 20-04-23**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Main roads, Cross roads and drains in ward no.10 Doddabommasandra

Agency : Sri. CHANNAKESHAWA ENTERPRISES, Prop. Kiran Gowda D, No:882, 2nd Floor, Monika Nilaya, 13th Cross, Havanoor, Extn, Nagasandra Post, Bangalore-560073

Customer Reference : BBMP/EE/BTP/WO/28/2022-23

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 18-04-23

Type of Mix : BC-Plant (Bituminous Concrete)

Date of Test : 18-04-23

Oven Dry Weight : 5000 Grams

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-17(grading-2)
19	0	0	0.0	100.0	100
13.2	91	91	1.8	98.2	90-100
9.5	705	796	15.9	84.1	70-88
4.75	897	1693	33.9	66.1	53-71
2.36	585	2278	45.6	54.4	42-58
1.18	493	2771	55.4	44.6	34-48
0.6	506	3277	65.5	34.5	26-38
0.3	525	3802	76.0	24.0	18-28
0.15	457	4259	85.2	14.8	12-20
0.075	349	4608	92.2	7.8	4-10
PAN	392	5000	100	0.0	0

* The results obtained are satisfactory as per standard requirements.

Note:-
The results pertain to the samples received and tested.
All information Furnished by Agency/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

AE-13

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

AEE (WRP) SD

Page 1/1
End of Report

TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Lab ID	:	**CP-RW-2023-06-19-18** **Date: 21-04-23**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Main roads, Cross roads and drains in ward no.10 Doddabommasandra
Agency	:	Sri. CHANNAKESHAWA ENTERPRISES, Prop. Kiran Gowda D, No:882, 2nd Floor, Monika Nilaya, 13th Cross, Havanoor, Extn, Nagasandra Post, Bangalore-560073
Customer Reference	:	BBMP/EE/BTP/WO/28/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-04-23
Type of Mix	:	BC(Bitumenous Concrete)
Date of Test	:	18-04-23

Type of Binder	:	60/70
% of Binder Used	:	5.4%
Weight of Aggregate	:	200.0 gm
Weight of Binder	:	10.8 gm
Temperature of water bath	:	40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.5	1.5	98.3	Minimum Retained Coating 95%
2	98.5	1.5		
3	98.0	2.0		

* The results obtained are satisfactory as per standard requirements.

Note:-
The results pertain to the samples received and tested.
All information Furnished by Agency/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

AE-13

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

AEE (VRP) SD

****End of Report****

PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR BITUMINOUS CONCRETE

Lab ID	:	**CP-RW-2023-06-19-18** **Date: 21-04-23**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Main roads, Cross roads and drains in ward no.10 Doddabommasandra
Agency	:	Sri. CHANNAKESHAWA ENTERPRISES, Prop. Kiran Gowda D, No:882, 2nd Floor, Monika Nilaya, 13th Cross, Havanoor, Extn, Nagasandra Post, Bangalore-
Customer Reference	:	BBMP/EE/BTP/WO/28/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-04-23
Type of Mix	:	BC (Bituminous Concrete)
Date of Test	:	18-04-23

Table 500-16 : Physical Requirements fo Coarse Aggregate for Bituminous Concrete

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	12.4	Combined Flakiness & Elongation Index for BC is Maximum 35%	IS:2386 Part I
	Elongation Index	11.8		
Strength	Aggregate Impact Value	22.1	Maximum 24%	IS:2386 Part IV
Specific gravity	Specific gravity	2.68	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.21	Maximum 2%	IS:2386 Part III

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested.
All information Furnished by Agency/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

AE-13

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quallity Manager

AEE (VRP) SD

TESTS RESULTS ON STABILITY OF MIX

Lab ID	:	**CP-RW-2023-06-19-18** **Date: 21-04-23**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Main roads, Cross roads and drains in ward no.10 Doddabommasandra
Agency	:	Sri. CHANNAKESHAWA ENTERPRISES, Prop. Kiran Gowda D, No:882, 2nd Floor, Monika Nilaya, 13th Cross, Havanoor, Extn,
Customer Reference	:	BBMP/EE/BTP/WO/28/2022-23
Source of Sample	:	Hot Mix Plant, Bangalore
Sample Condition	:	Satisfactory
Date of Receipt	:	18-04-23
Type of Mix	:	BC (Bituminous Concrete)
Date of Test	:	18-04-23

The results of the tests conducted on the Bituminous Concrete mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.14	11.13	10KN(min)
2	Marshal flow at 60°C, mm	3.52	3.51	2-4
3	Percent air Voids	4.82	4.83	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.28	14.26	13-15
5	Percent Voids filled with Bitumen(VFB %)	71.87	71.63	65-75
6	Density, g/cc	2.25	2.26	_

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested.
All information Furnished by Agency/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

AE-13

AEE (VRP) SD

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	**CP-RW-2023-06-19-18**	**Date: 28-04-23**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.	
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.	
Project Name	:	Improvements to Main roads, Cross roads and drains in ward no.10 Doddabommasandra	
Agency	:	Sri. CHANNAKESHAWA ENTERPRISES, Prop. Kiran Gowda D, No:882, 2nd Floor, Monika Nilaya, 13th Cross, Havanoor, Extn, Nagasandra Post, Bangalore-560073	
Customer Reference	:	BBMP/EE/BTP/WO/28/2022-23	
Source of Sample	:	Sample supplied by Agency	
Date of Receipt	:	27-04-23	
Type of Mix	:	BC (Bituminous Concrete)	
Date of Test	:	27-04-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	475	474.5
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1} \times 100$	5.40	5.50
7	Average percentage	%	5.45	

AE13

FOR CIVIL Pro.

CIVIL Pro Sig..... Date..... BANGALORE

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

AEE(VRP) SD

Lab ID : **CP-RW-2023-06-19-18** **Date: 28-04-23**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 475

IS Sieve Size (mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	7	7	1.5	98.5	90-100
9.5	66	73	15.4	84.6	70-88
4.75	113	186	39.2	60.8	53-71
2.36	80	266	56.0	44.0	42-58
1.18	30	296	62.3	37.7	34-48
0.6	13	309	65.1	34.9	26-38
0.3	49	358	75.4	24.6	18-28
0.15	40	398	83.8	16.2	12-20
0.075	44	442	93.1	6.9	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 474.5

IS Sieve Size (mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	5	5	1.1	98.9	90-100
9.5	65	70	14.8	85.2	70-88
4.75	114	184	38.8	61.2	53-71
2.36	80	264	55.6	44.4	42-58
1.18	35	299	63.0	37.0	34-48
0.6	30	329	69.3	30.7	26-38
0.3	40	369	77.8	22.2	18-28
0.15	33	402	84.7	15.3	12-20
0.075	41	443	93.4	6.6	4-10

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested.
All information Furnished by Agency/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

AE-13

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

AEE (VRP) SD

End of Report

DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID	:	**CP-RW-2023-06-19-18** **Date: 15-06-23**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Main roads, Cross roads and drains in ward no.10 Doddabommasandra
Agency	:	Sri. CHANNAKESHAWA ENTERPRISES, Prop. Kiran Gowda D, No:882, 2nd Floor, Monika Nilaya, 13th Cross, Havanoor, Extn, Nagasandra Post, Bangalore-560073
Customer Reference	:	BBMP/EE/BTP/WO/28/2022-23
Sample Condition	:	Satisfactory
Date of Receipt	:	14-06-23
Type of Mix	:	Tack coat
Date of Test	:	14-06-23

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.802	0.771
5	Weight of tack Coat (d=c-b)	Kg	0.022	0.023
6	Rate of spread of tack coat	Kg/sq.m	0.244	0.256
7	Average	Kg/sq.m	0.250	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested.
All information Furnished by Agency/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate.

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

AE-13

End of Report

AEE (VRP) SD